MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

OUTLINE OF ONGOING & PROPOSED WATER QUALITY PROTECTION ACTIVITIES FOR THE TONGUE AND POWDER RIVER WATERSHEDS IN MONTANA
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I. Public Outreach and Stakeholder Involvement (Powder & Tongue River Watersheds)

Schedule Note: Public outreach and stakeholder involvement is an ongoing part of the water quality protection and restoration processes from beginning to end.

A. Coordinate With & Obtain Input/Involvement From Key Stakeholders

1. Conservation Districts
2. Tongue River Assessment Group
3. Local politicians, landowners, and others.

B. Obtain Assistance and Pursue Involvement of Key Agency and University Personnel

C. Provide Timely Updates and Review Opportunities to Stakeholders and Others

II. Initial Characterization (all major waterbodies, essentially all *parameters)

Schedule Note: Many of the activities under II are currently underway and generally overlap each other.

* The term "parameter" as used in this outline applies to any potential pollutant (TDS, iron, sediment, fluoride, etc) or any measure of conditions (habitat, flow, etc) that can be associated with water quality and/or beneficial use support

A. Determine Water Quality Levels Necessary to Support Existing Beneficial Uses (generally only necessary for narrative water quality standards; applies to all relevant beneficial uses)

1. Irrigation use levels
   a) SAR value
   b) Salinity value
   c) Other parameters
2. Fish/aquatic life
   a) Salinity
   b) Others parameters
3. Stock water
   a) Salinity
   b) Other Parameters

B. Determine Existing Water Quality Conditions in Montana (significant waterbodies in the watersheds)

1. Gather and evaluate existing data
2. Identify data gaps
   a) Seasonal/flow considerations
      - Irrigation season
      - Low flow
   b) Sufficient Credible Data (SCD) and Beneficial Use Determination (BUD) needs
   c) Data needed to verify previously identified impairments from 303(d) list
   d) Data needed to help determine natural background conditions
3. Pursue additional monitoring and associated data evaluations to fill data gaps
   a) Tongue River watershed reconnaissance study (summer 2001)
   b) Powder River watershed reconnaissance study (summer 2001)
   c) USGS gaging station routine and expanded monitoring
   d) Others

C. Negotiate Temporary Water Quality Limits at the Montana/Wyoming Border Based on Current Conditions and Available Data

D. Make/Update *Impaired Waterbody Determinations

1. Document Sufficient Credible Data and Beneficial Use Determination
2. Update future 303(d) lists (list of waterbodies needing a water quality restoration plan/TMDL development)

* An "impaired waterbody" means a waterbody or stream segment for which sufficient credible data shows that the waterbody or stream segment is failing to achieve compliance with applicable water quality standards

E. Determine Potential Coal Bed Methane (CBM) Impacts to Surface Water Quality (for each parameter of concern)

1. Identify parameters of concern
2. Gather and evaluate existing data
   a) Ground water quality data
      - In Montana
      - In Wyoming
   b) Existing CBM discharge related information
      - In Montana (Redstone, etc)
      - In Wyoming
   c) Results from various modeling evaluations and associated reports (includes many of the Wyoming studies)
3. Identify data gaps
4. Pursue additional monitoring and associated data evaluations to fill data gaps
   a) Additional ground water data: upper Tongue R. area (John Wheaton proposal)
   b) Continued CBM data gathering and evaluations for Wyoming development
   c) Other studies in Montana or throughout the basin
5. Summarize results and conclusions

III. Water Quality Restoration Activities (for Each Parameter Causing an Impairment)

Schedule Note: The activities found under III generally follow those activities found under II. Activity A generally occurs prior to Activity B and so forth.

A. Quantify Water Quality Impacts by Source Category

1. Identify approaches (monitoring, modeling, etc) and data needs for quantifying impacts
2. Quantify impacts from existing point source discharges
3. Quantify impacts from existing nonpoint source categories
   a) Perform monitoring as needed
   b) Perform modeling and other analyses as needed
   c) Document results
4. Predict impacts from future CBM development (reference results from II-E and EIS documentation under V)
5. Predict impacts from other significant future sources (Tongue River Railroad? Future coal development?)

B. Set Water Quality Targets and Calculate Total Reductions/Modifications

1. Identify primary target(s) based on conditions necessary to meet water quality standards and associated beneficial uses
   a) Incorporate seasonal considerations
   b) Consider ability to measure targets
2. Identify total reduction in load or total modification to existing conditions necessary to meet primary targets
   a) Incorporate a margin of safety into the calculations to address uncertainties, etc.
   b) Set additional goals/targets as desired to help track or measure progress.

C. Identify Management Practice Options to Address Reductions/Modifications Within Montana

1. Identify potential management practices for each significant nonpoint source category
   a) Existing nonpoint sources
   b) Future nonpoint sources
2. Identify potential management practices options for point sources
   a) Existing point sources
   b) CBM sources (reference II-E results and EIS documentation under V)
3. Evaluate feasibility of applying the different practices
   a) Identify potential reductions/improvements for different source type/practice combinations
   b) Identify costs and funding opportunities
   c) Identify potential implementation opportunities and constraints

D. Apportion Responsibilities (Allocate Load Reductions or Modifications)

1. Develop a negotiated approach, using the results from III-C, that represents a fair sharing of responsibilities toward meeting the primary water quality target among all significant existing and potential future sources (one or more of the below steps will be necessary for each parameter causing an impairment)
   a) Allocate loading limits associated with existing and future CBM growth in Montana
   b) Set criteria at Montana/Wyoming border to reflect Wyoming allocations (modify temporary limits identified under II-C as needed)
   c) Set criteria at Montana/N. Cheyenne and Montana/Crow boundaries to reflect potential allocations
   d) Allocate reductions or modifications associated with Montana nonpoint source activities (existing and future).
      - Allocations should be developed for each significant source category
      - Identify priorities as needed to address a phased approach, limited funding, uncertainties, and other considerations.
2. Identify additional targets to help monitor progress toward meeting above allocations.

E. Develop Monitoring Plan(s)

1. To evaluate overall progress toward meeting primary and secondary restoration targets and other goals associated with the water quality restoration plan(s)
   a) Identify responsibilities
   b) Identify monitoring locations, seasons, dates, etc.
   c) Identify funding sources
2. To provide continuous feedback on actual CBM impacts vs. predicted CBM impacts within Wyoming and Montana as CBM development continues to progress (only applies to CBM parameters of concern associated with an impairment to a waterbody)
   a) Identify responsibilities
   b) Identify monitoring locations, seasons, dates, etc.
   c) Identify funding sources

F. Water Quality Restoration Plan(s) Documentation (by watershed)

1. Incorporate information necessary to satisfy TMDL submittal requirements
2. Obtain stakeholder input and public comment
3. Submit for approvals

G. Implementing Water Quality Restoration Plans

1. Through required CBM permit limits and other required and related CBM protection efforts in Montana
2. Through a program of voluntary implementation for nonpoint source management practices on private lands in Montana
   a) Technical assistance provided by local experts, state agencies, universities, etc.
   b) Financial assistance provided via grants and other sources

H. Implement Monitoring Plan(s)

1. Document progress
2. Use results to modify restoration plan(s) and/or restoration activities as needed

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IV. Water Quality Protection Activities (for CBM Related Parameters of Concern that are Not Causing an Impairment)

Schedule Note: The activities found under IV generally follow those activities found under II and are intended to occur within the same time frame as those activities found under III. Activity A generally occurs prior to Activity B and so forth.

A. Identify Potential Impacts Associated with CBM Development and other Future Sources (coordinated with II-E, III-A-4, and III-A-5)

1. Existing and future CBM development in Montana,
2. Existing and future CBM development in Wyoming
3. Potential future CBM development from N. Cheyenne & Crow Reservations
4. Any other potential new sources in Montana or elsewhere (Tongue River Railroad? Future coal development?)

B. Identify Potential Water Quality Protection Levels for Major Waterbodies

1. Levels associated with antidegredation and numerical standards
2. Levels associated with narrative standards and possible sharing of assimilative capacity

C. Negotiate a Water Quality Protection Approach Between Montana, Wyoming, N. Cheyenne, and Crow (coordinated with III-D)

1. Identify numerical levels at the Montana/Wyoming Border based on negotiated sharing of protection responsibilities (modify II-C limits if needed)
2. Identify numeric levels/allocations to address cumulative impacts from all future CBM development within Montana, including N. Cheyenne and Crow Reservations.
3. Identify numeric levels/allocations applicable to any other significant future source categories

D. Develop Monitoring Plan(s) (coordinated with III-E)

1. To evaluate overall progress toward meeting water quality protection levels and other related water quality protection goals
   a) Identify responsibilities
   b) Identify monitoring locations, seasons, dates, etc.
   c) Identify funding sources
2. To provide continuous feedback on CBM impacts within Montana and Wyoming as development continues to progress
   a) Identify responsibilities
   b) Identify monitoring locations, seasons, dates, etc.
   c) Identify funding sources

E. Water Quality Protection Plan(s) Documentation (as needed)

F. Implementing Water Quality Protection Plans

1. Through required CBM permit limits and other required and related CBM protection efforts in Montana (coordinated with III-G-1)
2. Through continued voluntary application of water quality protection practices applied to existing nonpoint sources on private lands in Montana (coordinated with III-G-2)

G. Implement Monitoring Plan(s) (coordinated with III-H)

1. Document progress
2. Use results to modify protection activities as needed

V. Develop Necessary National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA) Documentation

For the purpose of this water quality workplan, the EIS and other NEPA/MEPA steps are not developed in detail. A few ongoing and major tasks are included for coordination purposes.

Schedule Note: Some of the activities found under V have started and are coordinated with many of the activities under II, and may end up occurring at the same time as some of the activities under III and IV. Activity B follows Activity A in time.

A. Develop an EIS for CBM in Montana

1. Scoping Meetings (completed during January 2001)
2. Data gathering and analyses (coordinated with II-B, II-E, III-A-4 and IV-A-1)
3. Identification of potential water quality mitigation measures
4. Other information gathering and document development work .....

B. Future project-specific NEPA and/or MEPA EAs and possible EIS's